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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,922	03/24/2004	Kenji Akahoshi	16869S-111700US	8046

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EXAMINER

DANIELSEN, NATHAN ANDREW

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/808,922	Applicant(s) AKAHOSHI ET AL.	
	Examiner Nathan Danielsen	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>03/24/04</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-16 are pending.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

3. Claims 3 and 9 are objected to because the phrase "is so designed as to" is awkward. The examiner suggests changing this to --is operable to--, or another equivalent. Claims 4, 5, 10, and 11 are objected to because the phrase "An optical disk apparatus according to claim X, said objective lens driving means including" is awkward. The examiner suggests -- An optical disk apparatus according to claim X, wherein said objective lens driving means includes--, or another equivalent. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 7 recites the limitation "said control means". There is insufficient antecedent basis for this limitation in the claim. Claims 8-12 are rejected as being dependent on an indefinite claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3-6, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaki et al (US Patent 5,481,510; hereinafter Masaki).

Regarding claim 1, Masaki discloses an optical disk apparatus for recording data on a recordable optical disk having a power calibration area on a radially inner side, comprising:

a laser diode for emitting a laser beam (col. 12, lines 1-8);

a laser diode driver module for driving said laser diode (col. 12, lines 1-8);

an objective lens for constricting the laser beam (col. 7, lines 28-35);

objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk (figure 6); and

control means for controlling said laser diode driver module and said objective lens driving means (figure 6),

wherein said control means controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a radially inner side relative to the power calibration area while controlling said laser diode driver module for emitting the laser beam (col. 11, line 61 through col. 12, line 8).

Regarding claim 3, Masaki discloses where said objective lens driving means is so designed as to cause said objective lens to seek a location close to a radially innermost periphery of the power calibration area and subsequently move said objective lens more radially inwardly than the power calibration area (col. 11, line 61 through col. 12, line 8).

Regarding claim 4, Masaki discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon moving said objective lens radially inwardly beyond the power calibration area, said objective lens is roughly moved by using said slider (col. 7, lines 28-53 and col. 11, line 61 through col. 12, line 8).

Regarding claim 5, Masaki discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon

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moving said objective lens radially inwardly beyond the power calibration area, said objective lens is roughly moved by using said slider and thereafter said objective lens is finely moved by means of said tracking coil (col. 11, lines 19-52; where, when the positioner is stopped, the only possible movement of the objective lens is by using the tracking actuator).

Regarding claim 6, Masaki discloses where the area located radially inwardly of the power calibration area and destined for irradiation with the laser beam is an area in which data cannot be recorded (figure 12).

Regarding claim 13, Masaki discloses a method of recording data on a recordable optical disk having a power calibration area on a radially inner side (figure 12), wherein irradiation of laser beam is performed at an area located radially inwardly beyond the power calibration area for the purpose of adjusting laser power (col. 11, line 61 through col. 12, line 8).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 7-12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masaki, in view of Yoshikawa (US Patent 4,734,914).

Regarding claim 7, Masaki discloses an optical disk apparatus for recording data on a recordable optical disk having a power calibration area on a radially extreme peripheral side, comprising:

a laser diode for emitting a laser beam (col. 12, lines 1-8);

a laser diode driver module for driving said laser diode (col. 12, lines 1-8);

an objective lens for constricting the laser beam (col. 7, lines 28-35);

objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk (figure 6); and

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a control circuit for controlling said laser diode driver module and said objective lens driving means (figure 6).

wherein said control means controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a radially extreme side relative to a power calibration area while controlling said laser diode driver module for emitting the laser beam (col. 11, line 61 through col. 12, line 8).

However, Masaki fails to disclose where the radially extreme side relative to a power calibration area is a radially outer side.

In the same field of endeavor, Yoshikawa discloses where the radially extreme side relative to a power calibration area is a radially outer side (suggested by the combination of figure 12 of Masaki and col. 3, lines 48-51 of Yoshikawa; note also that figure 20 of Masaki shows where the positioner is moved to a radially outermost position (beyond the outer groove/mirror zone boundary portion) prior to the positioner being moved to a radially outermost position).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made use of a mirror portion at a radially outer portion of a disc with respect to an outer power calibration area, as taught by the combination of Masaki and Yoshikawa, for the purpose of producing a stable laser output of a particular level (col. 2, lines 23-26).

Regarding claims 2 and 8, Masaki discloses everything claimed, as applied to claim 1 and Masaki, in view of Yoshikawa, discloses everything claimed, as applied to claim 7. However, Masaki fails to disclose where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of the optical disk.

In the same field of endeavor, Yoshikawa discloses where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of said optical disk (col. 3, lines 38-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Masaki with the functionality of Yoshikawa, for the purpose of producing a stable laser output of a particular level (col. 2, lines 23-26).

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Regarding claim 9, Masaki, in view of Yoshikawa, discloses everything claimed, as applied to claim 7. Additionally, Masaki discloses where said objective lens driving means is so designed as to cause said objective lens to seek a location close to a radially outermost periphery of the power calibration area and subsequently move said objective lens more radially outwardly than the power calibration area (col. 11, line 61 through col. 12, line 8).

Regarding claim 10, Masaki, in view of Yoshikawa, discloses everything claimed, as applied to claim 7. Additionally, Masaki discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon moving said objective lens radially outwardly beyond the power calibration area, said objective lens is roughly moved by using said slider (col. 7, lines 28-53 and col. 11, line 61 through col. 12, line 8).

Regarding claim 11, Masaki, in view of Yoshikawa, discloses everything claimed, as applied to claim 7. Additionally, Masaki discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon moving said objective lens radially outwardly beyond the power calibration area, said objective lens is roughly moved by using said slider and thereafter said objective lens is finely moved by means of said tracking coil (col. 11, lines 19-52; where, when the positioner is stopped, the only possible movement of the objective lens is by using the tracking actuator).

Regarding claim 12, Masaki, in view of Yoshikawa, discloses everything claimed, as applied to claim 7. Additionally, Masaki discloses where the area located radially outwardly of the power calibration area and destined for irradiation with the laser beam is an area in which data cannot be recorded (figure 12).

Regarding claim 14, Masaki discloses a method of recording data on a recordable optical disk having a power calibration area on a radially extreme side (figure 12), wherein irradiation of laser beam is performed at an area located radially beyond the power calibration area for the purpose of adjusting laser power (col. 11, line 61 through col. 12, line 8).

However, Masaki fails to disclose where the radially extreme side relative to a power calibration area is a radially outer side.

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In the same field of endeavor, Yoshikawa discloses where the radially extreme side relative to a power calibration area is a radially outer side (suggested by the combination of figure 12 of Masaki and col. 3, lines 48-51 of Yoshikawa; note also that figure 20 of Masaki shows where the positioner is moved to a radially outermost position (beyond the outer groove/mirror zone boundary portion) prior to the positioner being moved to a radially outermost position).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made use of a mirror portion at a radially outer portion of a disc with respect to an outer power calibration area, as taught by the combination of Masaki and Yoshikawa, for the purpose of producing a stable laser output of a particular level (col. 2, lines 23-26).

Regarding claims 15 and 16, Masaki discloses everything claimed, as applied to claim 13 and Masaki, in view of Yoshikawa, discloses everything claimed, as applied to claim 14. However, Masaki fails to disclose where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of the optical disk.

In the same field of endeavor, Yoshikawa discloses where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of said optical disk (col. 3, lines 38-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Masaki with the functionality of Yoshikawa, for the purpose of producing a stable laser output of a particular level (col. 2, lines 23-26).

Citation of Relevant Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Fennema et al (US Patent 5,136,569) disclose a method where optimum power values are obtained by calibrating a laser irradiated at an inner mechanically extreme location after defocusing the lens/beam in that location.

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Closing Remarks/Comments

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen
12/12/2006



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER